

AMSU Global Hydrological Products (Ralph.R.Ferraro@noaa.gov)

1) Basic Description of Data Set(s). This must provide a detailed description of the data sets that will be produced by this ARC component. The description must include:

- A- Pentad and monthly mean rainfall, rain frequency, total precipitable water, cloud liquid water, cloud frequency, snow cover frequency, sea-ice concentration and sampling frequency
- B- NOAA-15, -16 and -17 Advanced Microwave Sounding Unit.
- C- Global (90N-90S)
- D- Pentad and monthly 1 degree and 2.5 degree grid
- E- January 2000 to present
- F- Monthly update.
- G- Data available on ORA web server: <ftp.orbit.nesdis.noaa.gov>. Plans to transition to NCDC during 2005.
- H- Data sets are being tested in a number of blended product suites under development, including GPCP. In particular, a recent extension to the precipitation product is to include falling snow.

2) Scientific Stewardship Activities Required for Continued Production of the Climate-Quality Data Set

- A- These products are relatively new and are undergoing evaluation. They can be visualized at <http://www.orbit.nesdis.noaa.gov/corp/scsb/mspps/main.html>. Expansion to include NOAA-N will be developed this upcoming year.
- B- Comparisons against other existing satellite and gauge analysis.
- C- Reprocessing is feasible every two years.
- D- NESDIS/OSDPD maintains the operational generation of the orbital (or L2) products and ORA develops the retrieval algorithms (Ralph Ferraro and Fuzhong Weng), funded through a different project. We are responsible for the QA of these products, which are used as input into the L3 products supported under the ARC.

3) Transition of ARC Project to Operational Center

Outline pathway for eventual transition of your operational process to an established NOAA operational Center using the four steps outlined below.

Steps.

1. The products are already being generated at NESDIS in a routing manner by the Office of Research and Applications, with several components being handled through automated processes (e.g., FTP, cron jobs, etc.). We have already established a web site and archive at NCDC for the SSM/I products and that model will be followed for the AMSU products eventually. This effectively accomplishes steps 1 & 2.
3. As was previously described, the SSM/I product generation process, initially developed as part of a research program, comprises of several steps involving multiple languages and systems. What needs to happen next is for the software to be ported to a common system (e.g., a LINUX box), fully automated and properly documented. This process has already been initiated and we plan on completing this during 2005. This process will also include a parallel product generation with the current system to insure that they produce the same results. Ultimately, the system should then be handed off to either NESDIS/OSDPD or NESDIS/NCDC, but will require additional funds for those centers. The AMSU swath products are already operational and so only the climate portion of the system needs to be made operational. The most logical place for this to take place would be within OSDPD since they maintain the swath product generation already. Resources would need to be identified for the transition of the climate portion of this system. Also, resources are needed to reprocess the products using the current suite of algorithms.
4. If successful, the systems then become operational within OSDPD or NCDC and we will continue to provide Scientific Data Stewardship oversight as needed. If the systems are designed with the proper web-based interfaces and comparison tools, this can be handled fairly easily. In addition to routine stewardship, we will need to address specific user concerns, typically, questions regarding the performance and usefulness of the products over certain geographical regions where questions typically arise.